Technology Planning Outline

Spring 2000

1. Technology Committee

- involve key people:
  - people with vision, leaders, technical and curriculum specialists
  - faculty, staff, and others who will broaden the focus, from managing hardware and software to include funding, technical support, training, curriculum development
- share decision making and collaborate with all those who have a stake in the success of the district
- devise a building and system-wide approach to planning and evaluation, which includes defining standards
- take advantage of resources in the community and gain community support

2. Vision/Mission Statement

- focus on improved teaching and learning with technology, not about technology -- emphasize content and pedagogy and not just hardware and software
- develop a shared/mutual vision of where technology will take you, that will help set priorities and help you know what you're trying to accomplish and whether you're successful
- envision distributed learning - ample resources where students and teachers can use them frequently, conveniently, and easily
    - computers of sufficient power and sophistication
    - networked multimedia computers that are connected to the internet
    - computers in the classroom rather than in lab environments
    - ample computer-based equipment and peripherals
    - appropriate video resources such as TVs, VCRs, cable, satellite and video disc players
    - telecommunications network and other technologies for two-way communication of voice, data, and graphics

3. Needs assessment

- conduct needs assessment activities that help lead to
  - an infrastructure which supports the district's vision for technology and the goals and expectations for student learning
    - computers of sufficient power and sophistication
    - computers accessible for all learners
    - computer-based equipment such as CD-ROMs, printers, and LANs
    - video resources such as TVs, VCRs, cable, satellite and video disc players
    - telecommunications network and other technologies for two-way communication of voice, data, and graphics
  - a flexible design to accommodate different activities and durable enough to stand up to continuous use
    - sufficient power and wiring
    - equipment distributed to the most accessible sites in school for student and teacher use
    - information technology facilities that foster safe and easy use
    - school facilities that provide for
    - adequate number of electrical outlets
    - surge protection and grounding
    - lightning protection

    - backup systems
    - telephone outlets
    - static reduction
    - temperature and humidity control
    - acoustical treatment (for multimedia applications)
    - lighting and light control
    - security devices
  - a uniform platform (computers, networking, applications software, voice and video applications, etc.) for delivery of technology services both within and among buildings
  - standards to achieve cost savings and reduce possibility of purchasing several solutions to the same problem

4. Technology Inventory

- conduct an inventory of hardware and software that provides information about
  - technologies being used
  - hardware and software available and where they are located
  - current staff skills in technology
  - teacher needs in integrating technology effectively
  - current staff development opportunities related to technology
  - who is responsible for implementation of technology in the district
  - technology-related curriculum applications in use
  - existing infrastructure and whether it ties in with a larger (regional/consortia/ state) design
- for the FCC, look at
  - computer equipment currently available or budgeted for purchase for the current, next, or other future years (do computers have modems, what speed modems, etc.)
  - internal connections in place or plans for installations of internal connections
  - computer software necessary to communicate with other computers over the internal network and over the public telecommunications network currently available or budget for purchase for the current, next, or other future years
  - experience of and training received by relevant staff
  - existing or budgeted maintenance contracts to maintain computers
  - capacity of electrical system
- examine technical support needs, whereby
  - technology resources and materials are reviewed annually for currency and for value to the curriculum in supporting teaching and learning
  - hardware is reviewed for possible replacement within at least five years of purchase and annually thereafter
  - equipment receives regular inspection and routine maintenance on an annual basis
  - a comprehensive security system is in place to safeguard the school's technology resources
  - district maintains an up-to-date inventory of its technology resources
  - the roles and responsibilities are clearly defined for the management and coordination of the use of information technology resources throughout the district
  - school's insurance policy provides adequate coverage for materials and liability

5. Goals and Objectives

- establish goals aimed at
  - improving student achievement
  - improving staff and student competence with technology
  - implementing technology tools into new and existing curriculum and instruction
  - creating pilots and model projects for utilization of technology in learning

- creating a learning community with respect to technology and education
- enabling teachers and students to become quality users of technology

- carry out a comprehensive technology plan that addresses
  - managing resources, determining costs of installation, maintaining inventory, and ensuring technical support
  - offering a continuous and unified technology curriculum for everyone in the community, including kindergarten through adult levels
  - offering ongoing technology training

6. Curriculum Integration

- design curriculum guides, frameworks, lesson plans that
  - are driven by the goals and performance indicators for student learning
  - take into account the learning needs and interests of students
  - are articulated and support a shared vision for student learning
  - empower teachers to provide students with learning experiences that would be impossible or difficult to achieve without technology resources
  - employ technology resources to expand and strengthen the system of assessing student learning
  - are continually evaluated and renewed
- train staff (needs/plans should be determined by recommendations from professional development and/or inservice committees, building technology committees, and district committee) through a system that provides adequate support for the initiation, implementation, and the institutionalization phases of technology integration
  - assist staff in making the paradigm shift required to enable technology to best support instruction
  - provide a variety of technology related staff development opportunities that focus on effective applications of technology in innovative ways
  - garner commitment and support from staff and administrators and plan for adequate time and resources
  - offer training at times that are convenient to teaching staff and at locations that are suitable for course offerings
  - provide continuity of programs over time, flexible scheduling, effective trainers/ presenters, and effective follow-up strategies
  - use adult learning principles and use sound evaluation procedures

  <u>Effective Professional Development</u> - teachers must have ample technology resources and training
    - professional development costs that account for at least 30% of all technology spending (the percentage recommended by state and local education experts in a recent Department of Education report. Note: Missouri State Board of Education is now requesting at least 20%)
    - training that focuses on classroom use rather than on technical mastery
    - training that integrates technology into the classroom and revolutionizes the teaching and learning process, where
      - teachers tend to be coaches and facilitators rather than lecturers
      - physical layout may look different (desks and work spaces may be bunched together in small groups rather than facing a blackboard)
      - classes may be longer and cover multiple subjects, promoting cross-curricular learning
      - students and teachers communicate with each other internally as well as with parents and students/teachers/experts from across the country

- students use technology to research, create, communicate as well as practice basic skills, individually as well as in groups
- students are independent and collaborative problem solvers, theorists, communicators, record keepers
- there's excitement about collaborative learning that engages students in relevant, real-world problem solving

7. Evaluation

- monitor the technology plan as it is implemented; document what worked well, what was learned, unanticipated outcomes
- schedule ongoing formative assessment and yearly summative assessment strategies that look at
  - how well implementation fit according to the plan
  - how well architecture reflects the vision of what will be created as well as the current status and short-term priorities and concerns
  - how equitable and universal student access is to modern computers and the Internet
  - how teachers and students use (and their degree of expertise in using) technology
  - how effective curriculum, instruction, and resources are

Funding

- design a budget planning process that is driven by the district's vision for technology and the goals and expectations for student learning
- engage in realistic budgeting that includes
  - initial costs for equipment, software, and other necessary infrastructure costs
  - funding for ongoing costs (upgrades and maintenance)
  - planning for obsolescence and the need to replace equipment and acquire additional software
  - substantial allocations for professional development to support ongoing training and staff development programs
  - a permanent line item in the school's budget, established to support allocations for the purchase, maintenance, and updating of resources
- take full advantage of opportunities to stretch available financial resources to further advance the vision for technology
  - higher education and/or business partnerships
  - local cooperatives/consortia for purchasing technology
  - potential advantages of lease/purchase agreements
- fully explore opportunities to raise funds
  - grants from state or federal agencies, private or corporate sponsors
  - parent and community organizations
  - alumni organizations
- plan for continued funding – don't treat the cost of technology for education as a one-time capital expenditure but look at long-term technology plans that address
    - new purchases
    - system for accepting (and standardizing) donations
    - on-site technical/instructional support
    - maintaining and/or upgrading hardware, software, quality digital content
    - on-going commitment to professional development